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ICT Competencies of Foreign Languages Teachers

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Abstract

The purpose of this study was to identify key factors which may have a significant impact on teachers ICT skills. The traditional classroom has transformed itself from an auditorium with a chalkboard to a place (not even a room as education may be arranged virtually) with an access to the Internet flooded with various learning tools and resources. A lot of attention is paid to implementing ICT into educational process at all levels (state, regional, university, etc.). However, the most important thing about ICT in education is not the governmental policy but teachers themselves, their attitude towards ICT, their knowledge and skills to work with it, their willingness to use it and readiness to further education in this domain. The main methods used in this research were questionnaire, interview and observation. The questionnaire consisted of 30 questions sorted into 3 fields: demographic data, teachers ICT knowledge and skills, application of ICT in the classroom. Besides closed questions there were some open ones which help us gain more information about teachers' attitude towards using ICT, their fears about its possible negative effect and challenges they have to face while introducing ICT at their lessons. The research shows the majority of foreign languages teachers have necessary knowledge, above basic or intermediate skills of ICT applications according to Graham Davies classification (Davies, 2009), they are quite optimistic about positive effect ICT have on students' competencies.

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1. Introduction

The field of ICT (Information and Communication Technology) is very dynamically developing. New technologies play important role in everyday life of most people in developed world. It is only natural that school

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system also had to react to this situation and has implemented ICT into the educational process. On the government level, ICT was incorporated into strategic planning and curricular documents not only as an independent subject but also as a tool for teaching.

However, the most important thing about ICT in education is not the governmental policy but teachers themselves; their attitude towards ICT and its use at their lessons, their competencies to work with it and to involve it into teaching and learning, their willingness to further education in this field.

To make the best use of ICT, teachers must be equipped with adequate ICT competencies. In the process of integrating ICT into education, both teachers ICT competencies and how they perceive the role of ICT in their teaching/learning processes play key roles.

Competency has been defined as “personal characteristics (e.g. skills, knowledge, attitudes) that an individual possesses or needs to acquire, in order to perform an activity within a specific context, whereas performance may range from the basic level of proficiency to the highest levels of excellence” (Sampson and Fytros, 2008).

Mandl and Krause (2003) defined competence as a system of prerequisites for successful action in certain domains that can be influenced by practice and learning. According to Klein, Spector, Grabowski, and de la Teja (2004), competency is a set of related knowledge, skills, and attitudes that enable an individual to effectively perform the activities of a given occupation or job function to the standards expected in employment.

In reviewing the literature, different attempts have been made to discuss the effect ICT might have on education. Kuhlenschmidt and Kacer (2010) highlight 3 possible kinds of technology impact on teaching. The authors state that:

- technology has had a positive influence on teaching because students receive faster feedback, students have better collaborative learning experiences, students and faculty can be reached at any time, and learning can take place anywhere at any time
- technology has had a negative influence on teaching because computers may act as a distractor in class, the use of computer-generated slides does not permit higher levels of learning, and instructors may use technology to distance themselves from students
- technology has had no impact on technology - the brain is what controls learning not technology.

Application of ICT opens up new opportunities in arranging educational environment. The new Web provides resources, tools and technologies that can make educational process social as they help create collaborative learning atmosphere.

Modern ICT lets present new material on a higher level. Speaking about learning a foreign language it is difficult to overestimate the role of ICT.

Different learning management systems (LMS) are widely used in teaching practices in educational institutions. For example, Moodle, Blackboard, have built-in wiki tools, which are designed to collaborate, share and build online content and are especially useful for learners who are separated by time and place (Richardson, 2006). Teachers can create a variety of products from virtual libraries and language laboratories to simple testing in LMS.

A learning management system is a software application for the administration, documentation, tracking, and reporting of training programs, classroom and online events, e-learning programs, and training content. LMSs range from systems for managing training and educational records, to software for distributing courses over the Internet with features for online collaboration. Student self-service (e.g., self-registration on instructor-led training), the provision of on-line learning (e.g., computer-based training, read & understand), on-line assessment, management of continuous professional education (CPE), collaborative learning (e.g., application sharing, discussion threads), and training resource management (e.g., instructors, facilities, equipment), are dimensions to Learning Management Systems. Some LMSs are Web-based to facilitate access to learning content and administration and are used by educational institutions to enhance and support classroom teaching and offering courses to a larger population of learners across the globe (Belias, Athanasios, 2012; Ellis, 2009; Aberdour, 2007).

So, application of ICT, on the one hand, contributes to the individualisation of education, as it allows to study at one's own pace and, on the other hand, is an effective means of forming communicative culture of the students. The latter is of vital importance due to the global integration. In order to implement ICT successfully teachers should have enough knowledge and skills to work with it, and be willing to use it while preparing for the lessons as well as in the class.

2. Researching methods

To gain an insight into our chosen topic, we decided to use different researching methods, these are questionnaire, interview and observation.

Questionnaire belongs to one of the most common researching techniques for pedagogical reality, that's why we chose it as the main method for our preresearch.

The concrete questionnaire was designed, with a modification necessary for our setting and purpose, according to the one that was used for the Australian research Teacher ICT Skills: Evaluation of the Information and Communication Technology (ICT) Knowledge and Skill Levels of Western Australian Government School Teachers and later in Research on ICT Competencies of Mother Tongue Teachers in the Czech Republic (Department of Czech Language and Literature Faculty of Education Palacky University Olomouc, Czech Republic) (Department of Education and Training Western Australia, 2006, Pustinová, 2012). It consisted of 30 questions sorted into three fields – demographic data, teachers ICT knowledge and skills, application of ICT in the classroom. Besides closed-ended ones, it contained also some facultative open-ended questions, which provided more information of qualitative character.

Our questionnaire was intended for all (it means primary, secondary and higher school) foreign languages teachers. Online survey forms were emailed to school and university teachers. 116 answers were received, the outputs of this questionnaire were valuable for us in the meaning of its descriptive character. It served as a first acquaintance with the recent state and status of ICT in schools and universities among foreign languages teachers.

3. Result

Significant part of our research concerned with the teachers' education in the field of ICT, its evaluation and awareness of available ICT courses. Respondents could choose from options: ICT subject at secondary or high school; obligatory subject at the university; optional subject at the university, teacher development courses on ICT. Indication of particular options was dependent on respondents' age, as was statistically proven (null hypothesis was rejected on the significance level $\alpha = 0,05$). It was only natural because older teachers had no or a very limited chance to attend ICT subject at secondary/high school. To sum it up, most teachers from the older categories indicated teacher development courses on ICT, which we consider as very positive in sense of their willingness to self-educate); most of the teachers from the youngest category indicated ICT subject at secondary/high school and obligatory subject at the university. The percentage of those who assessed the teacher development courses on ICT as valuable was definitely higher than those who considered them to be ineffective. This is quite optimistic finding for the Higher School of Economics, which offers ICT courses to its teachers and was mentioned, among others, by the respondents.

Extensive part of the survey form was focused on ICT knowledge and skills possessed by teachers. Respondents were asked about their use of the following common ICT applications and activities: file navigation; email; Internet; word processing; presentation packages; spreadsheets. A list of skills was provided for each field and teachers indicated which they possessed. It is appropriate to mention here that the questions asked only, if a teacher had or had not the skill; it asked nothing about frequency of usage or level of mastering. That should be issue for further research. All the 6 offered applications and activities belong to common ones, ranging from 100% to 82% of teachers, who have ever used it. All teachers are familiar with the Microsoft Windows operating system that is believed as essential for all users of personal computers (Davies, 2009), and they can do all main tasks such as use a mouse and know when to right-click or left-click, maximise or minimise a window, open two or more windows applications at the same time, restore a window, find a file that was mislaid, move or copy a file from one folder to another. The application that most teachers have mastered well is email. All of them can handle all the tasks – receive, create, send and forward emails, send carbon and blind carbon copies, file a received message, print a received message, add attachments and locate sent and deleted messages. Email was also indicated by teachers as the most common means of their communication (97% communicate via email with students and colleagues and even 100% use it for private purposes). Social networks are not so popular, only 67% of teachers have accounts there and one third uses them regularly and can not only set up an account, but also write a contribution to a

discussion list, blog or wiki, upload a photo and a video clip. The majority of teachers (97%) use help files effectively, recognize different file types, change file type (e. g. from .doc to .pdf), and zip/unzip files. Word processing is also well mastered by most of our respondents. Between 84% and 100% can create new document, open existing document, print, change fonts, insert, copy and past text and pictures, create a table within a document, set language of a document, use spell check, format a document (change page set up, margins), create tables, insert page numbers, add headers and footers, create a bulleted or numbered list. A bit more than 70% is able to insert footnotes, index and lists. But only about 50% can save document as a web page. Almost all teachers can navigate to known websites, do basic searches, save images and text and create favorites or bookmarks. More than three quarters can download and play audio/video files and search in History of a browser. More than one half is able to download and install software (73%) and conduct complex searches (57%). 64% can alter browser preferences. Ability to create web pages is definitely the worst – Web 2.0 is managed by 47%.

Presentation software has never been tried by 5% of respondents. However, most (94% and more) of those, who have used it, can create new slide show, edit existing one, insert pictures and charts, change fonts and layout and navigate a presentation. Between 70% and 78% are able to insert and use hyperlinks, animate slide show (transitions, elements), change timing of a slide show and add sounds. About one half can use navigation buttons. Same attention was paid to spreadsheets. Almost all (more than 91%) can create a new spreadsheet (enter data) and enter data into an existing spreadsheet. About three quarters of respondents can also insert or delete rows and columns. Between 63% and 68% are able to insert basic calculations, format and sort cells and create new charts (graphs). A bit less than one half can edit existing charts (graphs). Other options – import and/or export data, refer to multiple worksheets, apply complex formulae and use filtering – were indicated by less than one third of teachers.

Another question we were interested in was the usage of programs. The majority of teachers chose at least one application, which they use for creation of extra materials for their lessons. Most popular are MS Word (87%), MS Power Point (72%).

Teachers' positive attitudes towards ICT and their belief that use of ICT is valuable for them as well as for their students is one of the key factors of implementation of ICT in education. That is why we paid a great deal of our attention to this area.

We offered four sentences to our respondents:

1. Use of ICT in foreign language lessons is pointless; these tools fall into technical subjects; however, I consider the use of ICT to be an external need, not a real benefit for teachers and educational process.
2. I consider ICT in education to be mainly a very good motivational element for learners; for me personally, it is a tool like many others.
3. ICT in lessons gives a chance to show and practice subject matter newly and attractively; I don't mind working with ICT at all.
4. Although we shouldn't overestimate the importance of new technologies, I am definitely for the use of ICT in education; I like working with it and it also offers me new ways of self-realization and motivation for students (Pustinová, 2012).

Positive attitude of teachers towards ICT was confirmed there. Almost a half of teachers agreed with the last statement - I like working with ICT and said that they frequently use it for professional development. About one fifth consider ICT to be a tool like others, for example CD player or video recorder that are also very useful in language learning. Only 6% consider ICT as only external need, without a real benefit for teachers and educational process.

Frequency of ICT use depends mostly on the type of activity. Private use not related to school work is practiced most often (68% of all indicated to do it daily), followed by searching for extra information, tasks and materials; creating own materials; and communication with colleagues and other professionals, indicated to do it daily or several times per week by more than 63%. Providing web support is absolutely most unusual (more than one half of all never do that), which corresponds to previous findings.

Also teachers pointed out negative aspects of ICT. First and foremost, that was time consumption. Almost 70% of respondents said that it's impossible to find suitable material and they spend a lot of time adapting it to needs of a particular class. Poor quality or insufficiency of ICT school equipment as well as frequent breakdowns of service were mentioned by the majority of teachers. Quite often (43%) teachers blame ICT, Facebook in particular, for low level of students' spelling skills and grammar knowledge.

Last but not least part of our research was focused on perception of students' involving and attitudes towards the work with ICT from the teachers' point of view. Table 1 below depicts how frequently teachers involve their students in different kinds of work with ICT.

Table 1. Frequency of students' involvement into work with ICT from the teachers' point of view.

Activity	every lesson	several times per month	at least once a term	a never
to learn new subject matter	4,00%	52,00%	41,00%	3,00%
to master subject matter that hasn't been fully or correctly understood	3,00%	49,00%	44,00%	4,00%
practicing of knowledge, which has been already gained	13,00%	57,00%	28,00%	2,00%
communication with other people	4,00%	62,00%	27,00%	7,00%
searching for information, materials and ideas	5,00%	88,00%	6,00%	1,00%
class presentation	7,00%	65,00%	25,00%	3,00%
learn to work collectively	5,00%	48,00%	43,00%	4,00%

As we can see, most often ICT is used several times per month. Group of those who encourage students' work with ICT daily does not exceed 13% and, in reverse, those who do not engage it ever is 7%. If we compare this with the previously presented data of teachers' ICT use frequency, we realize that teachers tend to spend more time working with ICT individually at home than to cooperate with students and support implementation of ICT into teaching process although most of them agreed that ICT has strong motivational effect on students, as was shown before. The fact that students react positively was confirmed in the question that was asked about students' behavior during lessons, in which ICT was used. Fifty eight percent indicated that students showed quite positive attitude and were more active. Another fifth agreed that students were definitely more active, positive, concerned and cooperative and were supported (by teachers) to use ICT for their presentations and projects. No changes in behavior were seen by 13%, 7% were not able to judge any difference first of all because they did not use ICT in their lessons.

4. Conclusion

ICT helps to increase transparency, availability and flexibility of education, find an appropriate way to teaching and learning due to quick feedback, autonomy of the learners and collaboration, effectively process, store and present information.

According to the conducted research foreign languages teachers have above basic or intermediate level of knowledge of ICT applications, quite positive attitude towards ICT, believe in strong motivational effect on students first and foremost due to finding an individual approach to every participant of education process as the basis of interaction in the educational environment. Educational process based on incorporating ICT into education leads to increasing the overall level of information and communication technologies competences of both teachers and students. Foreign language teachers are aware of problems and challenges they have to face while implementing ICT into learning practices, but are sure that benefits outweigh negative aspects and, therefore, are willing to use ICT for educational purposes.

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